

**AECL-6797-Rev. 1
ATOMIC ENERGY
OF CANADA LIMITED**



**L'ENERGIE ATOMIQUE
DU CANADA, LIMITEE**

**RADIATION EFFECTS ON LIVING SYSTEMS:
A BIBLIOGRAPHY OF AECL PUBLICATIONS**

**EFFETS DES RAYONNEMENTS SUR LES ORGANISMES VIVANTS:
UNE BIBLIOGRAPHIE DES PUBLICATIONS DE L'EACL**

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Compiled

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RESUME

Cette bibliographie comprend des communications et des comptes-rendus rédigés par des savants de l'Energie Atomique du Canada, Limitée en ce qui a trait aux effets qu'exercent les rayonnements sur les organismes vivants. Elle se divise en trois parties: la Radiobiologie, la Radiobiologie chimie et la Radiochimie. Il est prévu que cette bibliographie sera régulièrement mise à jour.

L'Énergie Atomique du Canada, Limitée
Établissement de recherches nucléaires de Whiteshell
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ABSTRACT

This bibliography includes papers and reports by Atomic Energy of Canada Limited scientists concerning radiation effects on living systems. It is divided into three sections: Radiobiology, Radiation Biochemistry and Radiation Chemistry. It is intended that the bibliography will be updated regularly.

Atomic Energy of Canada Limited
Whiteshell Nuclear Research Establishment
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1. INTRODUCTION

Research within Atomic Energy of Canada Limited in the radiobiological field involves fundamental studies of the effects of nuclear radiation on living matter. Over four hundred papers and reports have been published in the open literature in the past thirty years in this area. A strong need for a listing of these publications has developed, and this bibliography has therefore been compiled.

A companion report, Atomic Energy of Canada Limited Report, AECL-6319-Rev 1(1980), "Bibliography of Environmental Research", covers the effects of radiation on the environment, including plants, animals and insects living in the air, in water and on land.

This bibliography is divided into three main sections:

1. Radiobiology
2. Radiation Biochemistry
3. Radiation Chemistry

The citations are arranged chronologically by AECL report or reprint number within each section or sub-section. An author index is included at the end of the bibliography.

2. RADIOBIOLOGY

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The following papers are contained in this report (page numbers in parentheses):

A.M. Marko	GENERAL INTRODUCTION (1-2)
H.C. Birnboim	INTRODUCTION TO CELL BIOLOGY AND DNA STRUCTURE (2-8)
R.E.J. Mitchell	FREE RADICALS AND RADIATION DAMAGE IN CELL MEMBRANES (8-10)
J.D. Childs	THE EFFECTS OF MUTATIONS IN DNA AS ILLUSTRATED WITH A BACTERIAL VIRUS (10-15)
N.E. Gentner	DNA REPAIR SYSTEMS IN A RADIORESISTANT BACTERIUM (16-26)
P. Unrau	RECOMBINATIONAL REPAIR OF DNA IN NUCLEATED CELLS (26-29)
M.C. Paterson	REPAIR OF DNA IN HUMAN CELLS (30-34)
D.K. Myers	INFLUENCE OF DNA REPAIR ON ASSESSMENT OF RADIATION HAZARDS (34-42)

12. A.M. Marko, D.K. Myers, I.L. Ophel, G. Cowper and H.B. Newcombe, RESEARCH IN RADIATION BIOLOGY, IN THE ENVIRONMENT AND IN RADIATION PROTECTION AT CRNL. Atomic Energy of Canada Limited Report, AECL-5911 (1978).

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